



BILLING CODE 6717-01-P
DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission

Increasing Market and Planning Efficiency through Improved Software [Docket No. AD10-12-013]

Notice of Technical Conference:
Increasing Real-Time and Day-Ahead Market and Planning Efficiency Through Improved Software

Take notice that Commission staff will convene a technical conference on June 21, 22, and 23, 2022 to discuss opportunities for increasing real-time and day-ahead market efficiency of the bulk power system through improved software. A detailed agenda with the list of and times for the selected speakers will be published on the Commission's website¹ and in eLibrary after May 20, 2022.

This conference will bring together and encourage discussion between experts from diverse backgrounds, including electric power system operators, software developers, and professionals from government, research centers, and academia. The conference will bring these experts together for the purposes of stimulating discussion, sharing information, and identifying fruitful avenues for research on improving software for increased efficiency and reliability of the bulk power system.

This conference will build on discussions at prior conferences in this proceeding by focusing on topics identified as important to market efficiency in those conferences. Broadly, such topics fall into the following categories:

- (1) Software for better modeling and computation of storage resources and distributed energy resources (DERs), especially software that addresses challenges such resources pose to current market-clearing and dispatch algorithms.
- (2) Software advances to help with the transition to increased use of probabilistic models in system planning, whether scenario-based or stochastic, to better account low-probability, high-impact events, such as extreme weather events, which are increasingly common.
- (3) Improvements to the ability to identify and use flexibility in the existing systems in ways that improve bulk power system reliability and economic efficiency, including transmission constraint relaxation practices, ramp management, and improving resources' responsiveness to dispatch instructions.

¹ <https://www.ferc.gov/industries-data/electric/power-sales-and-markets/increasing-efficiency-through-improved-software>

- (4) Representations of uncertainty that increase market efficiency and lead to better understanding of events that could impact reliability of the bulk power system, including: 15-minute unit-commitment and day-ahead market intervals; stochastic modeling; software for forecasting and enhancing visibility into changing system conditions; improved modeling approaches to energy and reserve dispatch; and software for managing uncertainties in variable energy resource output.
- (5) Software related to grid-enhancing technologies, such as those described in Docket Nos. AD19-19² and AD19-15,³ including optimal transmission switching, dynamic transmission line ratings, power flow controls, and any software related to implementing the Commission's recent rulemaking regarding line ratings in Order No. 881.⁴
- (6) Software for better modeling and computation of resources with distinct operating characteristics such as storage resources, multi-stage/multi-configuration resources, hybrid resources, aggregations of DERs, and others. Presentations on this topic should focus on alternative formulations and solution methods for market models.
- (7) Improvements to the representation of physical constraints that are either not currently modeled or currently modeled using mathematical approximations, including voltage and reactive power constraints, stability constraints, fuel delivery constraints, and constraints related to contingencies.
- (8) Software that enables the calculation of prices that better reflect costs of operation and that provide better incentives for efficient market entry and market exit.
- (9) Other improvements in algorithms, model formulations, or hardware that may allow for increases in market efficiency and enhanced bulk power system reliability.

Within these or related topics, we encourage presentations that discuss modeling best practices, existing modeling practices that need improvement, any modeling advances newly achieved, or perspectives on increasing market efficiency through improved power systems modeling.

The conference will take place virtually via WebEx, with remote participation from both presenters and attendees. Further details on remote attendance and participation will be released prior to the conference.

² *Electric Transmission Incentives Policy under Section 219 of the Federal Power Act*, Docket No. AD19-19-000

³ *Managing Transmission Line Ratings*, Docket No. AD19-15-000

⁴ *Managing Transmission Line Ratings*, Order No. 881, 177 FERC ¶ 61,179 (2021)

Attendees must register through the Commission's website on or before June 10, 2022.⁵ WebEx connections may not be available to those who do not register.

Speaker nominations must be submitted on or before April 22, 2022 through the Commission's website⁶ by providing the proposed speaker's contact information along with a title, abstract, and list of contributing authors for the proposed presentation. Proposed presentations should be related to the topics discussed above. Speakers and presentations will be selected to ensure relevant topics and to accommodate time constraints.

The Commission will accept comments following the conference, with a deadline of July 29, 2022.

There is an "eSubscription" link on the Commission's web site that enables subscribers to receive email notification when a document is added to a subscribed docket(s). For assistance with any FERC Online service, please email FERCOnlineSupport@ferc.gov, or call (866) 208-3676 (toll free). For TTY, call (202) 502-8659.

FERC conferences are accessible under section 508 of the Rehabilitation Act of 1973. For accessibility accommodations please send an email to accessibility@ferc.gov or call toll free (866) 208-3372 (voice) or (202) 502-8659 (TTY), or send a fax to (202) 208-2106 with the required accommodations. This notice is issued and published in accordance with 18 CFR 2.1.

For further information about these conferences, please contact:

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DATED: February 24, 2022.

Debbie-Anne A. Reese,
Deputy Secretary.

⁵ The attendee registration form is located at <https://www.surveymonkey.com/r/SHFLFKV>

⁶ The speaker nomination form is located at <https://www.surveymonkey.com/r/S3M89MK>

